

of Silver, or Tin, or Regulus of Antimony, in fusion or amalgamed with a very little Mercury become white; which shews both that the particles of white metals have much more superficies, and so are smaller, than those of Gold and Copper, and also that they are so opake as not to suffer the particles of Gold or Copper to shine through them. Now it is scarce to be doubted, but that the Colours of Gold and Copper are of the second or third order, and therefore the particles of white metals cannot be much bigger than is requisite to make them reflect the white of the first order. The volatility of Mercury argues that they are not much bigger, nor may they be much less, least they lose their opacity, and become either transparent as they do when attenuated by vitrification, or by solution in menstruums, or black as they do when ground smaller, by rubbing Silver, or Tin, or Lead, upon other substances to draw black Lines. The first and only Colour which white metals take by grinding their particles smaller is black, and therefore their white ought to be that which borders upon the black Spot in the center of the Rings of Colours, that is, the white of the first order. But if you would hence gather the bigness of metallic particles, you must allow for their density. For were Mercury transparent, its density is such that the Sine of incidence upon it (by my computation) would be to the sine of its refraction, as 71 to 20, or 7 to 2. And therefore the thickness of its particles, that they may exhibit the same Colours with those of Bubbles of Water, ought to be less than the thickness of the Skin of those Bubbles in the proportion of 2 to 7. Whence it is possible that the particles of Mercury may be as little

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